REMARKS

This application has been reviewed in light of the Office Action dated October 17, 2006. Claims 1-3, 5-20, and 22-41 remain pending in this application. Claims 1, 3, 16, 19, 20, and 30, the independent claims, have been amended to define still more clearly what Applicant regards as the invention. Claims 4 and 21 have been cancelled without prejudice or disclaimer of the subject matter. Favorable reconsideration is respectfully requested.

Applicant notes with appreciation the indication that Claim 10 would be allowable if rewritten so as not to depend from a rejected claim, and with no change in scope. That claim has not been so rewritten because, for the reasons given below, its base claim is believed to be allowable.

Claims 1, 2, 19, and 33 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,314,452 B1 (*Dekel*); Claims 3-7, 9, 11, 12, 14-18, 20-32 and 34-41, as being anticipated by U.S. Patent No. 6,249,614 B1 (*Kolesnik*); and Claims 3, 6-9, and 13, as being anticipated by U.S. Patent No. 6,658,158 B2 (*Fukuhara*).

First, cancellation of Claims 4 and 21 renders the rejections of those claims moot.

Claim 1 is directed to a method of processing a coded digital signal including a set of samples of different types obtained by coding a set of original samples representing physical quantities, and including a set of information representing original samples and parameters used during the coding. The method includes determining a subset of samples corresponding to a selected part of the original digital signal using the set of information, and obtaining a number of samples of at least one predetermined type and

which are contained in the determined subset of samples. The method also includes deciding, at the decoding side, whether or not to modify the determined subset of samples before restoring the selected part of the original signal. The decision is made according to the obtained number of samples of the at least one predetermined type and according to a required level of quality.

Among other notable features of Claim 1 are deciding, at the decoding side, whether or not to modify the determined subset of samples before restoring the selected part of the original signal.

The general nature of *Dekel* has been discussed adequately in previous papers, and it is not believed to be necessary to repeat that discussion. Page 4 of the Office Action states:

> (Note, that the update operation occurs after the decoding, but the decision to modify or update happens before the decoding. Thus, a means for modifying that happens before the claimed restoring will overcome the examiner's interpretation.)

Claim 1 now recites (as noted above) deciding, at the decoding side, whether or not to modify the determined subset of samples before restoring the selected part of the original signal. As the Office Action concedes, nothing in *Dekel* would teach or suggest this feature.

Accordingly, Claim 1 is seen to be clearly allowable over *Dekel*.

Independent Claim 19 includes certain features which are similar in many relevant respects to the features discussed above in connection with Claim 1. Accordingly, Claim 19 is believed to be patentable over *Dekel* for at least the reasons discussed above.

Claim 3 is directed to a method of processing a coded digital signal including a set of samples obtained by coding a set of original samples representing physical quantities using a multiresolution coding format, and including a set of information relating to a size w, h of the set of original samples and its resolution res. The method includes locating a subset of original samples of given size zulx, zuly, zh, zw and resolution zres in the set of original samples according to the set of information relating to the size w, h and the resolution res of this set. The method also includes determining, amongst coefficients of a low-frequency sub-band LL_0 of a last decomposition level obtained by decomposition into frequency sub-bands of the set of original samples, a number of coefficients per dimension of the signal which correspond to the located subset. The method also includes deciding, at the decoding side, to modify or not to modify the size of the located subset according to the determined number of low-frequency sub-band coefficients before restoring the located subset. The deciding step including taking into account at least one predetermined criterion representing a quality level for the restored subset of original samples of the digital signal.

Among other notable features of Claim 3 is deciding, at the decoding side, to modify or not to modify the size of a located subset according to a determined number of low-frequency sub-band coefficients before restoring the located subset, including taking into account at least one predetermined criterion representing a quality level for the restored subset of original samples of the digital signal.

Kolesnik, as understood by Applicant, relates to video compression and decompression using dynamic quantization and/or encoding. As discussed in previous papers, Fig. 13 of *Kolesnick* is a data flow diagram illustrating the decompression of video

data compressed using the system of Fig. 1. Even if the decompression takes place at the decoding side, nothing in *Kolesnick* would teach or suggest deciding, at the decoding side, to modify or not to modify the size of a located subset according to a determined number of low-frequency sub-band coefficients before restoring the located subset, as recited in Claim 3.

The Examiner refers to numeral 1310 of Fig. 13 of *Kolesnik*. According to the Examiner's interpretation, the division of a coefficient matrix into sub-matrices of coefficients mentioned at column 14 of *Kolesnik* (see also column 11 of that patent) corresponds to the feature "modify the size of the located subset" recited in Claim 3. Thus, the deciding step, according to the Examiner's interpretation, should be read as: "deciding whether or not to divide a matrix into sub-matrices according to the number of low frequency subband coefficients." Applicant disagrees with this interpretation.

As a matter of fact, as mentioned in column 14 of *Kolesnik*, step 1310 is performed "in the same manner in which the compression system determined how to code the matrices (the relationship between the number of significant elements and the size of the matrix)." And, as discussed at column 11 of that patent, a similar algorithm (at the encoder side) is used to determine the coding mode, between sparse matrix variable length encoding and dense matrix variable length encoding (units 140 and 145). Further, at column 14 of that patent, it is stated that "[i]f it is determined that the quantized coefficient matrix was hierarchically encoded, then control passes to step 1315", and, in step 1315, it is stated that the size of the submatrices is read from the bitstream. For these reasons, *Kolesnik* does not teach or suggest a decision to modify or not to modify the size of matrices at the decoding side.

In addition, nothing in *Kolesnik* would teach or suggest "taking into account at least one predetermined criterion representing a quality level for the restored subset of original samples of the digital signal," as recited in Claim 3. As a matter of fact, contrary to the Examiner's interpretation, the quality criterion could not be considered to be the amount of processing discussed in *Kolesnik.* As discussed, for example, at page 2, lines 9 to 11 of the present application, the claimed quality level refers to the visual quality, and more generally to the perceptive quality.

Applicant has found nothing in *Kolesnik* that would teach or suggest deciding, at the decoding side, to modify or not to modify the size of a located subset according to a determined number of low-frequency sub-band coefficients before restoring the located subset, including taking into account at least one predetermined criterion representing a quality level for the restored subset of original samples of the digital signal, as recited in Claim 3.

Accordingly, Claim 3 is seen to be clearly allowable over *Kolesnik.*

Independent Claims 16, 20, and 30 each include certain features which are similar in many relevant respects to the features discussed above in connection with Claim 3. Accordingly, Claims 16, 20, and 30 are believed to be patentable over *Kolesnick* for at least the reasons discussed above.

Fukuhara, as understood by Applicant, relates to a wavelet coding/decoding method using tile based transform. An input picture is split into plural tile pictures and a wavelet transform is applied to input pictures on the tile picture basis to effect the encoding.

In *Fukuhara*, the aim is to avoid reading wavelet transform coefficients of the neighboring tile pictures in an overlapped fashion, as discussed at column 3, lines 44-46, and column 12, lines 5-9. On the contrary, in the method of Claim 3, coefficients from neighboring tiles, at the decoding side, are used to enhance the quality of the result.

In addition, in *Fukuhara*, the method is based on the use of systematic expansion of the coefficients, in a mirror symmetrical manner at the encoder side. At the decoder side, the wavelet coefficients are also symmetrically expanded before decoding, either using the symmetrical method or by adding the necessary number of 0 coefficients, as discussed at column 11, lines 14-17 and lines 42-43. For these reasons, in *Fukuhara*, there is no teaching or suggestion of a decision whether or not to modify or to expand the coefficients.

Further, regarding the recitation of "locating a subset" in Claim 3, the paragraph of *Fukuhara* cited in the Office Action concerns the localization of a position in the encoded bitstream, and not the position of the tile and its size.

Applicant has found nothing in *Fukuhara* that would teach or suggest deciding, at the decoding side, to modify or not to modify the size of a located subset according to a determined number of low-frequency sub-band coefficients before restoring the located subset, including taking into account at least one predetermined criterion representing a quality level for the restored subset of original samples of the digital signal, as recited in Claim 3.

Accordingly, Claim 3 is seen to be clearly allowable over *Fukuhara*.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as

references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

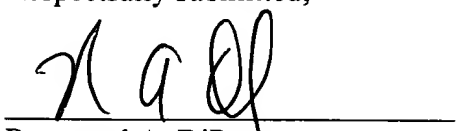
The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicants' undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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